Release notes for ENDF/B Development n-051_Sb_123 evaluation



April 26, 2017

- checkr Warnings:
 - 1. A previous error halted parsing of the current section $MAT=5131,\ MF=1,\ MT=451\ (1)$: Parsing stopped

ERROR(S) FOUND IN MAT=5131, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 109 TO 148

- checkr Errors:
 - 1. A variable is outside the allowed ENDF range MAT=5131, MF=1, MT=451 (0): Variable range

ERROR(S) FOUND IN MAT=5131, MF= 1, MT=451

MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 109

2. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=5131,\ MF=2,\ MT=151\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 150

3. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=1 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 560

4. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=2 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 585

5. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=3 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 3
SECTION 3/ 3 NOT IN DIRECTORY RECORD NUMBER 610

6. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=4 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 635

7. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 16 SECTION 3/ 16 NOT IN DIRECTORY

RECORD NUMBER 65

8. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 17 SECTION 3/ 17 NOT IN DIRECTORY

RECORD NUMBER 672

9. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 22 SECTION 3/ 22 NOT IN DIRECTORY

RECORD NUMBER 679

10. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 28 SECTION 3/ 28 NOT IN DIRECTORY

RECORD NUMBER 687

11. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 51 SECTION 3/ 51 NOT IN DIRECTORY

RECORD NUMBER 697

NOUDER 091

12. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 52 SECTION 3/ 52 NOT IN DIRECTORY

RECORD NUMBER 721

13. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 53 SECTION 3/ 53 NOT IN DIRECTORY

RECORD NUMBER 744

14. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=3, MT=54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 54 SECTION 3/ 54 NOT IN DIRECTORY

RECORD NUMBER 766

15. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 55 SECTION 3/55 NOT IN DIRECTORY

RECORD NUMBER

16. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 56 SECTION 3/56 NOT IN DIRECTORY

RECORD NUMBER 809

17. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT= 91 SECTION 3/ 91 NOT IN DIRECTORY

RECORD NUMBER 830

18. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 102 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT=102 SECTION 3/102 NOT IN DIRECTORY

RECORD NUMBER 850

19. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 103 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT=103 SECTION 3/103 NOT IN DIRECTORY

RECORD NUMBER

20. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 104 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT=104 SECTION 3/104 NOT IN DIRECTORY

RECORD NUMBER 894

21. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 3, MT = 105 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT=105 SECTION 3/105 NOT IN DIRECTORY

RECORD NUMBER 907

22. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5131, MF = 3, MT = 107 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 3, MT=107 SECTION 3/107 NOT IN DIRECTORY

RECORD NUMBER 918

23. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 2 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 2 SECTION 4/ 2 NOT IN DIRECTORY

RECORD NUMBER 932

24. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 16 SECTION 4/ 16 NOT IN DIRECTORY

RECORD NUMBER 1234

25. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 17 SECTION 4/ 17 NOT IN DIRECTORY

RECORD NUMBER 1289

26. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 22 SECTION 4/ 22 NOT IN DIRECTORY

RECORD NUMBER 1312

27. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 28 SECTION 4/ 28 NOT IN DIRECTORY

RECORD NUMBER 1337

28. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 51 SECTION 4/ 51 NOT IN DIRECTORY

RECORD NUMBER 1378

29. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 52 SECTION 4/ 52 NOT IN DIRECTORY

RECORD NUMBER 1671

30. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=4, MT=53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 53 SECTION 4/ 53 NOT IN DIRECTORY

RECORD NUMBER 1953

31. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=5131,\ MF=4,\ MT=54\ (0):\ Directory\ (b)$

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 54 SECTION 4/ 54 NOT IN DIRECTORY

RECORD NUMBER 2219

32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5131, MF = 4, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 55 SECTION 4/ 55 NOT IN DIRECTORY

RECORD NUMBER 2481

33. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=4, MT=56 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 56

SECTION 4/ 56 NOT IN DIRECTORY

RECORD NUMBER 2734

34. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=4, MT=91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 4, MT= 91 SECTION 4/ 91 NOT IN DIRECTORY

RECORD NUMBER 2839

35. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=5, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 5, MT= 16 SECTION 5/ 16 NOT IN DIRECTORY

RECORD NUMBER 2937

36. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=5, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 5, MT= 17 SECTION 5/ 17 NOT IN DIRECTORY

RECORD NUMBER 3187

37. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=5, MT=22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 5, MT= 22 SECTION 5/ 22 NOT IN DIRECTORY

RECORD NUMBER 3277

38. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=5, MT=28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5131, MF= 5, MT= 28 SECTION 5/ 28 NOT IN DIRECTORY

RECORD NUMBER 3370

39. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5131, MF=5, MT=91 (0): Directory (b)

- psyche Warnings:
 - 1. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 2.40786E-04 / DENSITY 8.69320E+01 SHOULD BE 9.92214E+01 (0): URR dens. (a)

FILE 2

SECTION 151

ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 2.40786E-04 DENSITY 8.69320E+01 SHOULD BE 9.92214E+01

2. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 2.69988E-04 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 2.32680E-04 / DENSITY 6.80590E+01 SHOULD BE 7.71722E+01 (0): URR dens. (a)

FILE 2

SECTION 151

ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 2.69988E-04 ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 2.32680E-04 DENSITY 6.80590E+01 SHOULD BE 7.71722E+01

3. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 2.46930E-04 / DENSITY 5.50480E+01 SHOULD BE 6.31409E+01 (0): URR dens. (a)

FILE 2

SECTION 151

ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 2.46930E-04 DENSITY 5.50480E+01 SHOULD BE 6.31409E+01

4. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.60005E-05 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 6.93259E-05 / DENSITY 1.28910E+02 SHOULD BE 1.24908E+02 (0): URR dens. (a)

FILE 2

SECTION 151

ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.60005E-05 ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 6.93259E-05 DENSITY 1.28910E+02 SHOULD BE 1.24908E+02

5. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.61346E-05 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.60008E-05 / DENSITY 8.49320E+01 SHOULD BE 8.92200E+01 (0): URR dens. (a)

FILE 2

SECTION 151

ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.61346E-05 ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.60008E-05 DENSITY 8.49320E+01 SHOULD BE 8.92200E+01 6. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.58405E-05 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.60002E-05 / DENSITY 6.60590E+01 SHOULD BE 6.93933E+01 (0): URR dens. (a)

FILE 2
SECTION 151
ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.58405E-05
ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.60002E-05
DENSITY 6.60590E+01 SHOULD BE 6.93933E+01

7. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.60000E-05 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.59991E-05 / DENSITY 5.40480E+01 SHOULD BE 5.67764E+01 (0): URR dens. (a)

FILE 2
SECTION 151
ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.60000E-05
ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.59991E-05
DENSITY 5.40480E+01 SHOULD BE 5.67764E+01

8. Level density in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.59979E-05 / ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.59998E-05 / DENSITY 4.57330E+01 SHOULD BE 4.80415E+01 (0): URR dens. (a)

FILE 2
SECTION 151
ENERGY = 5.40000E+03. STRENGTH FUNCTION IS 7.59979E-05
ENERGY = 1.00000E+05. STRENGTH FUNCTION IS 7.59998E-05
DENSITY 4.57330E+01 SHOULD BE 4.80415E+01

- recent Warnings:
 - 1. Statistical weight of certain L values were incorrect 0: RRR goof (a)

- fudge-4.0 Warnings:
 - 1. Missing a channel with a particular angular momenta combination resonances / resolved (Error # 1): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L=0, J=2.0 and S=2.0 for "capture" WARNING: Missing a channel with angular momenta combination L=1, J=2.0 and S=2.0 for "capture" WARNING: Missing a channel with angular momenta combination L=1, J=3.0 and S=2.0 for "capture" WARNING: Missing a channel with angular momenta combination L=1, J=3.0 and S=3.0 for "capture" ... plus 1 more instances of this message

2. Cross section does not match sum of linked reaction cross sections $crossSectionSum\ label\ 0:\ total\ (Error\ \#\ 0):\ CS\ Sum.$

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.18%

- fudge-4.0 Errors:
 - 1. The spin statistical weights are off, indicating missing channels resonances / resolved / MultiLevel_BreitWigner (Error # 0): badSpinStatisticalWeights

WARNING: The spin statical weights for L=1 sums to 2.0, but should sum to 3.0. You have too few channels for re

2. Calculated and tabulated Q values disagree. reaction label 8: n[multiplicity:'2'] + Sb122 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7469263.094558716 eV vs -8.9672e6 eV!

3. Energy range of data set does not match cross section range reaction label 8: n[multiplicity:'2'] + Sb122 / Product: n / Distribution: / uncorrelated - angular - XYs2d: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (9040801.0 -> 20000000.0) vs (9040800.0 -> 20000000.0)

4. Energy range of data set does not match cross section range reaction label 8: n[multiplicity:'2'] + Sb122 / Product: n / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (9040801.0 -> 20000000.0) vs (9040800.0 -> 20000000.0)

5. Calculated and tabulated Q values disagree. reaction label 9: n[multiplicity:'3'] + Sb121 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -14275644.210495 eV vs -1.5774e7 eV!

6. Calculated and tabulated Q values disagree. reaction label 10: n + H1 + Sn122 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -5071142.224395752 eV vs -6.566e6 eV!

7. Energy range of data set does not match cross section range reaction label 10: n + H1 + Sn122 / Product: n / Distribution: / uncorrelated - angular - XYs2d: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6619901.0 -> 20000000.0) vs (6619900.0 -> 20000000.0)

8. Energy range of data set does not match cross section range reaction label 10: n + H1 + Sn122 / Product: n / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6619901.0 -> 20000000.0) vs (6619900.0 -> 200000000.0)

9. Calculated and tabulated Q values disagree. reaction label 11: Sb124 + gamma~(Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 7963487.603118896 eV vs 6.4672e6 eV!

- 10. Calculated and tabulated Q values disagree. reaction label 12: n + He4 + In119 (Error # 0): Q mismatch
 - WARNING: Calculated and tabulated Q-values disagree: -2448545.028488159 eV vs -3.9143e6 eV!
- 11. Calculated and tabulated Q values disagree. reaction label 13: H1 + Sn123-s (Error # 0): Q mismatch
 - WARNING: Calculated and tabulated Q-values disagree: 874699.5406036377 eV vs -620490. eV!
- 12. Calculated and tabulated Q values disagree. reaction label 14: H2 + Sn122-s (Error # 0): Q mismatch
 - WARNING: Calculated and tabulated Q-values disagree: -2846576.123458862 eV vs -4.3415e6 eV!
- 13. Calculated and tabulated Q values disagree. reaction label 15: $H3 + Sn121_s$ (Error # 0): Q mismatch
 - WARNING: Calculated and tabulated Q-values disagree: -5402534.142120361 eV vs -6.8979e6 eV!
- 14. Calculated and tabulated Q values disagree.

 reaction label 16: He4 + In120-s (Error # 0): Q mismatch
 - WARNING: Calculated and tabulated Q-values disagree: 3653353.660186768 eV vs 2040910. eV!
- njoy2012 Warnings:
 - 1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 16 only mf4/mf5 provided
 - 2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 17 only mf4/mf5 provided
 - 3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 22 only mf4/mf5 provided

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to good evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 28 only mf4/mf5 provided

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 91 only mf4/mf5 provided